

IN THE CLAIMS:

This Listing of Claims replaces all prior Listings or versions of the claims in this application.

Listing of Claims

1. (Currently Amended) ~~A therapeutic~~ An immunogenic composition, comprising:
 - a) ~~a~~ an isolated dendritic cell;
 - b) a yeast vehicle selected from the group consisting of: a whole yeast, a yeast spheroplast, a yeast cytoplasm, a yeast ghost, and a subcellular yeast particle; and,
 - c) at least one antigen that is heterologous to the yeast vehicle;wherein said dendritic cell has been loaded intracellularly with said yeast vehicle and said at least one antigen.
2. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein a yeast cell or yeast spheroplast used to prepare said yeast vehicle was transformed with a heterologous nucleic acid molecule encoding said antigen such that said antigen is expressed by said yeast cell.
3. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 2, wherein said dendritic cell has been additionally loaded with free antigen.
4. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein, prior to loading said yeast vehicle into said dendritic cell, said yeast vehicle was loaded intracellularly with said antigen.
5. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 4, wherein said dendritic cell has been additionally loaded with free antigen.
6. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said antigen was covalently or non-covalently attached to said yeast vehicle prior to loading said yeast vehicle into said dendritic cell.
7. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 6, wherein said dendritic cell has been additionally loaded with free antigen.
8. (Currently Amended) The ~~therapeutic~~ immunogenic of Claim 1, wherein said yeast vehicle and said antigen were associated by mixing prior to or simultaneously with loading into said dendritic cell.

9. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said antigen is selected from the group consisting of viral antigens, mammalian cell surface molecules, bacterial antigens, fungal antigens, protozoan antigens, helminth antigens, ectoparasite antigens, and cancer antigens.

10. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said antigen is selected from the group consisting of: HIV-1 gag, HIV-1 env, HIV-1 pol, HIV-1 tat, HIV-1 nef, HbsAG, HbcAg, hepatitis c core antigen, HPV E6 and E7, HSV glycoprotein D, and *Bacillus anthracis* protective antigen.

11. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said composition comprises multiple antigens.

12. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said composition further comprises at least one biological response modifier.

13. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast is a nonpathogenic yeast.

14. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast is of a genus selected from the group consisting of *Saccharomyces*, *Candida*, *Cryptococcus*, *Hansenula*, *Kluyveromyces*, *Pichia*, *Rhodotorula*, *Schizosaccharomyces* and *Yarrowia*.

15. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast vehicle is selected from the group consisting of a whole yeast, a yeast spheroplast, a yeast cytoplasm, a yeast ghost, and a subcellular yeast particle.

16. (Currently Amended) A method to produce ~~a therapeutic~~ an immunogenic composition comprising a dendritic cell loaded with a yeast vehicle and an antigen that is heterologous to the yeast vehicle, said method comprising:

- a) forming a yeast vehicle-antigen complex, wherein the yeast vehicle is selected from the group consisting of: a whole yeast, a yeast spheroplast, a yeast cytoplasm, a yeast ghost, and a subcellular yeast particle; and,
- b) loading said dendritic cell with said yeast vehicle-antigen complex.

17. (Withdrawn) The method of Claim 16, wherein step (a) is performed by transfecting a yeast vehicle with a nucleic acid molecule encoding said antigen, such that said antigen is expressed by said yeast vehicle.

18. (Withdrawn) The method of Claim 16, wherein step (a) is performed by loading a yeast vehicle with said antigen by a method selected from the group consisting of: diffusion, active transport, liposome fusion, electroporation, phagocytosis, freeze-thaw cycles and bath sonication.

19. (Withdrawn) The method of Claim 16, wherein step (a) is performed by mixing together said antigen and said yeast vehicle, prior to or simultaneously with performing step (b).

20. (Withdrawn) The method of Claim 16, wherein said step (a) is performed by physically attaching said antigen to a yeast vehicle.

21. (Withdrawn) The method of Claim 20, wherein said attaching step is performed by a method selected from the group consisting of: crosslinking said antigen to said yeast vehicle and binding said antigen to a yeast cell wall protein on said yeast vehicle.

22. (Withdrawn) The method of Claim 16, wherein step (b) of loading is accomplished by a method selected from the group consisting of: diffusion, active transport, liposome fusion, electroporation, phagocytosis, and bath sonication.

23. (Currently Amended) A method to elicit an antigen-specific humoral immune response and an antigen-specific cell-mediated immune response in a mammal, said method comprising administering to said mammal ~~a therapeutic~~ an immunogenic composition comprising:

- a) ~~a~~ an isolated dendritic cell;
- b) a yeast vehicle, selected from the group consisting of: a whole yeast, a yeast spheroplast, a yeast cytoplasm, a yeast ghost, and a subcellular yeast particle; and,
- c) at least one antigen that is heterologous to the yeast vehicle;

wherein said dendritic cell has been loaded intracellularly with said yeast vehicle and said at least one antigen.

24. (Currently Amended) The method of Claim 23, wherein said ~~therapeutic~~ immunogenic composition is administered by a route selected from the group consisting of: intravenous, intraperitoneal, subcutaneous, intradermal, intranodal, intramuscular, transdermal, inhaled, intranasal, oral, intraocular, intraarticular, intracranial, and intraspinal.

25. (Currently Amended) The method of Claim 23, wherein said ~~therapeutic~~ immunogenic composition is administered with a pharmaceutically acceptable excipient.

26-28. (Cancelled)

29. (Currently Amended) ~~A therapeutic~~ An immunogenic composition for eliciting an antigen-specific, cellular and/or humoral immune response, comprising:

- a) ~~a~~ an isolated dendritic cell;
- b) a yeast vehicle selected from the group consisting of: a whole yeast; and a yeast spheroplast, ~~a yeast cytoplasm, a yeast ghost, and a subcellular yeast particle~~; and,
- c) at least one antigen that is heterologous to the yeast vehicle;

wherein said dendritic cell has been loaded intracellularly with said yeast vehicle and said at least one antigen.

30. (Cancelled)

31. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast vehicle is selected from the group consisting of: a whole yeast, a yeast spheroplast, a yeast cytoplasm, and a yeast ghost.

32. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast vehicle is selected from the group consisting of: a whole yeast and a yeast spheroplast.

33. (Currently Amended) The ~~therapeutic~~ immunogenic composition of Claim 1, wherein said yeast vehicle is a whole yeast.